

Improving the Practice of Financing Techniques and Technologies in the Field of Agriculture

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Annotation: The article analyzes the processes of valuation of collateral, arising from the development and financing of projects implemented in agriculture in our country, approaches to evaluation, positive results expected by commercial banks that have financed projects through collateral, and types of collateral.

Keywords: agriculture, bank, loan, collateral, valuation, cluster, investment projects, financing.

Introduction

As a result of structural changes in the agrarian sector of the economy and measures taken to diversify agricultural production reform, improve land reclamation, introduce modern high-efficiency technologies, and strengthen the material and technical base, the financial stability of agricultural enterprises is ensured. In the course of ongoing structural changes in agriculture, the main forms of agricultural production organization are farmers and peasant farms. Implementation of measures to encourage the development of farms is an important factor in their sustainable and effective development. Depending on the type of economy and the level of development, the countries are mainly divided into economy specialized in raw material production, industrial economy, post-industrial economy, mixed economy and countries based on innovation economy or knowledge economy. Innovative economy is the most developed type of economy and an educated society is characteristic for it. Currently, various mechanisms and institutional structures, i.e. the national innovation system, are being formed for the wide introduction and effective use of scientific and technical achievements. Technological modernization of today's agriculture is one of the priorities. A single technique aimed at further improving the management of the activities of agricultural machinery enterprises, increasing their efficiency and profitability, modernizing production in the field, technical and technological re-equipment, organizing the production of modern, high-performance, competitive machinery and equipment for the agro-industrial complex bank loans are also becoming important for the implementation of the policy. Real estate, movable property, future harvest in agriculture, financial assets, intellectual property, etc. as collateral for bank loans have both general and special features. Based on this, valuation practices as collateral for bank loans also have different mechanisms. On the basis of the above, below we will focus on the evaluation of the future harvest in agriculture as collateral for credit purposes.

Literature Review

Many economists have studied the issues of assessing the future harvest in the practice of providing loans with agricultural crops as collateral.

In particular, in the works of one of the economists Alexey Vladimirovich Ilin, the process of providing land plots and land areas designated for agricultural purposes as collateral and the factors influencing its use, as well as the main directions that will give impetus to this direction in the future, are researched. In this process, the researcher believes that it is appropriate to carry

out the stages of appraising agricultural land areas and pledging them in the same manner as the practice of mortgage lending in accordance with the law [1].

According to Boris Erofeev, land, including agricultural arable land relations, is a sum of relations between state management bodies, local self-government bodies, organizations, banks, mortgage organizations, agencies, citizens who have the right to own and dispose of property, and bodies that determine land relations. expressed. It states that the coordination of land relations should be formed by looking at this land as a natural resource, an object of real estate and the main means of production [2].

According to Nikolay Kovalenkova and others, target prices serve to ensure the parity ratio of industrial and agricultural production, in addition to covering bank loans, taxes and other costs. They are usually used to determine guaranteed prices for agricultural products, to determine the rate of collateral in mortgages, and to calculate statutory subsidies and compensations for agricultural producers. Here, R.G. Akhmetov, the evaluation process is increased in terms of the agricultural suitability of the evaluated property. He pointed out that this is a sum of indicators such as the level of agricultural exploitation of the area, the structural and external structure of the soil, and the state of distribution [3].

In recent years, large-scale projects in the field of agriculture have been put into practice in our republic, and this situation has brought the issue of collateral provision and its evaluation to an urgent level.

In particular, based on the relevant decisions of the Cabinet of Ministers of the Republic of Uzbekistan, the cluster method of growing agricultural products is being actively implemented. Since these situations make it necessary to evaluate agricultural products as collateral, in this article we will focus on problematic situations and their elimination.

Methodology

The study revealed the following positive results of overcoming the financial problems of enterprises operating with the help of innovations and information technologies using loans from commercial banks, including the growth of the country's gross domestic product (GDP), increased income and employment. To this end, using the data of the State Statistics Committee for the last 10 years, a correlation-regression analysis of the number of employed at enterprises operating in the country and the ratio of loans to commercial banks to enterprises to the share of enterprises was carried out. in GDP. According to the sample correlation coefficient, the influence of the number of people employed in this sector on the share of economic entities in GDP was high, $R = 0.9597$, and the share of bank loans to enterprises on the share of economic entities in GDP was high, i.e. $R = 0.7686$.

We performed regression analysis using Excel's Data Analysis feature. The bond density is $r = 0.992474054$ based on the scale. Hence, based on this scale, the correlation coefficient between the indicators has a very strong correlation level. According to the data, $a_0 = -157331$, $a_1 = 8.056$, $a_2 = 0.00075$, the straight-line regression formula took the following form:

$$KBYU(y) = 8,056KBBS(x_1) - 0,00075KBBKR(x_2) - 15,7331$$

Hence, the regression coefficient a_1 determines the relationship between the resulting sign (y) and the factor sign (x). This indicates how many units the resulting character increases when the factor character increases by one unit. We use the F-criterion to verify the adequacy of the regression equation ($Y=8,056-0x_1-0,00075x_2$).

According to the observed data, the calculated F_p (calculated, observed F) index was compared with the corresponding critical index F_k , (F critical, tabular).

$F_{\text{account}} = 4.25$, $F_{\text{table}} = 295.595$

Since F is a table $> F$ in the calculation, the (1) econometric model is considered adequate. $T_k = 2,262$, $T_{a_0} = -3,9$, $T_{a_1} = 15,38$, $T_{a_2} = -6,19$.

Since $T_{a1} > T_k$ in the calculation, a_1 means that the regression coefficient is significant. From the above regression analysis, the following conclusions can be drawn: an increase in the number of people employed in existing businesses by 1 percentage point will lead to an increase in the share of businesses in GDP by 8,056 per cent.

Data Analysis

At the present time, the rapid development of private sector representatives operating in agriculture relies on bank loans and other financial sources to finance the projects implemented by these enterprises or the costs of growing agricultural products. For example, to grow 492.9 tons of raw cotton from the harvest of 2021, 820 billion will be allocated from the funds of the State Support Fund for Agriculture under the Ministry of Finance. loan funds were attracted in the amount of soums [5].

In particular, the Cabinet of Ministers of the Republic of Uzbekistan No. 53 of January 25, 2018 "On measures to introduce modern forms of organization of cotton-textile production", March 31, 2018 "Additional measures on the organization of activities of cotton-textile production and clusters" on measures" No. 253, dated September 19, 2018 "On additional measures for the further development of cotton-textile production" No. 744 and several other regulatory documents, more than 70 cotton-textile and seed production clusters are operating in our republic.

In addition, in the decision No. 1037 of the Cabinet of Ministers of the Republic of Uzbekistan dated December 22, 2018 "On the placement of cotton by varieties in 2019 and the forecast volumes of cotton raw material cultivation", 1 mln. 2 million on an area of more than 33 thousand hectares. It is planned to produce 958,000 tons of raw cotton, almost 50% of which will be produced by the above-mentioned cotton-textile and seed clusters. The cultivation of not only cotton raw materials, but also other agricultural crops by these clusters and the implementation of large-scale investment projects by them creates a need for additional sources of financing, which shows the relevance of collateral provision and its assessment.

Decision No. 149 of the Cabinet of Ministers of the Republic of Uzbekistan dated February 28, 2018 "On measures for the widespread introduction of market mechanisms in agriculture" paid special attention to the issue of insurance. the need to develop proposals for improving the mechanism of crop insurance was mentioned [6].

If we refer to the figures, 6050.4 million will be used to finance the costs of growing raw cotton from the harvest of 2021. 1,241.6 million soums and 1,241.6 mln. It was decided to allocate loans in the amount of soums [7].

An additional 1 million at the expense of the cultivation of food crops, the establishment of intensive gardens and vineyards in the state program for the implementation of the "Year of supporting active entrepreneurship, innovative ideas and technologies" approved by the Decree of the President of the Republic of Uzbekistan dated January 22, 2018 No. PF-5308 . production of tons of fruits and vegetables, potatoes and other products is envisaged [8].

Discussions

The above cases increase the urgency of creating and improving a perfect insurance mechanism for loans obtained under the guarantee of the future harvest.

In the practice of lending by commercial banks to farms with a pledge of the future harvest, the assessment of the future harvest and the future amount of agricultural products can be determined based on the following.

- on the basis of evidence of the amount of harvest received by the borrower in the last three years (PQ-10, PQ-17 and other cargo documents);
- the level of productivity expected by the government organization that regulates and controls agricultural activities (Ministry of Agriculture) for a specific area, that is, the area where

crops are grown, which is planned to be mortgaged;

- Technological map (agro-technological card) submitted by the borrower for agricultural crops.

The amount of possible collateral for a specific area is determined as follows:

$$V_z = H \times S \times 0,1$$

Here,

V_z – future agricultural yield (in tons);

H – the productivity level of agricultural plants, in which this indicator should correspond to the minimum amount of indicators of the 3-year productivity level provided by the borrower. In addition, the crop area should not exceed the average productivity level of the area (centenary/hectare);

S – area (hectares);

0,1 – metric that converts quintals to tons.

The assessment of the collateral value of the agricultural harvest is determined using the amount of the pledged crop, its expected future price, and the discount rate.

$$S_z = V_z \times SS_p \times K_z$$

S_z – collateral value of agricultural crops (in soums);

V_z – future agricultural yield (in tons);

SS_p – expected future price of agricultural crops (soums/ton). The expected price should not exceed the last three years' sale price of agricultural produce in that area. If the expected price exceeds the sales price of the last three years, then the average of the three-year sales price in that area is determined.

K_z – discount rate;

The discount rate is determined as follows:

- The bank should not exceed 0.7 for borrowers with a positive credit history for more than two years. In addition, the borrower must have a positive experience of more than 5 years in growing the crops that are planned to be put as collateral in the bank;
- The bank should not exceed 0.6 for borrowers with a positive credit history for at least one year. In addition, the borrower must have a positive experience of more than 5 years, but not less than 3 years, in the cultivation of the crops that are planned to be put as collateral in the bank.

Conclusion

As a result of studying the problem, the following conclusion was formed:

1. Today, in our country, a wide range of bank loans are allocated for the producers of agricultural products. In this case, the fact that the future harvest is taken as a guarantee, and in certain cases the loan repayment period is not related to the period of crop cultivation, creates problems related to the return of loans.
2. The allocation of bank loans received by clusters for the cultivation of agricultural products in the form of one-time funds without taking into account the growing season or the growing season will cause the clusters to pay excessive loan interest and the banks' resources will be busy for a certain period of time.
3. The insurance company will have more funds due to the fact that the crop grown with loan default insurance is higher than the insurance premium, and the cluster enterprise will

calmly carry out agrotechnical activities in order to grow a full crop due to the loan default insurance, and the bank will be without any risks due to the loan default insurance, or allocates loans periodically based on the results of monitoring of agrotechnical activities without taking various precautionary measures. In turn, the insurance company will be able to direct the funds received from the insurance premium to more profitable projects through the stock market, and even in the event of an insurance event, it will be able to recover from the situation and pay the insurance coverage due to the high income received.

Based on the results of the research on the mechanism of collateral evaluation in agricultural lending, the following scientific-theoretical proposal and practical recommendations were developed:

1. For representatives of the private sector that grows agricultural products, it is advisable to gradually implement the practice of lending by pledging the future harvest based on the periodicity of crop cultivation, and in this case, the risk level is assessed by insurance companies.
2. It is necessary to emphasize that the future crop is pledged as a loan collateral and this crop is insured. In this case, in order to further guarantee loan repayment, insurance companies should take appropriate measures and calculations in order to insure the non-return of loans allocated to cluster enterprises, and in this case, the loans that are extinguished at the expense of the crop and its value, and the loan debt that is expected to become a problem, should be implemented by insurance companies..
3. Based on this, we believe that it is necessary to gradually implement the practice of lending for farmers of agricultural products by pledging the future harvest on the basis of the periodicity of crop cultivation, and risk assessment by insurance companies.
4. It is necessary to achieve the allocation of loans to clusters for the vegetation period of agricultural crops and the funds required for agrotechnical measures to be implemented on the day when these funds are needed. It is beneficial for the customer and the bank in every way. That is, the client does not pay excessive interest for the loan, and the bank earns income by temporarily spending the excess resource in other directions.

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